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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,738	04/10/2001	Robert W. Corrigan	SLM-05800	3462

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EXAMINER	
NALEVANKO, CHRISTOPHER R	

ART UNIT	PAPER NUMBER
2611	16

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/832,738	CORRIGAN ET AL.	
	Examiner	Art Unit	
	Christopher R Nalevanko	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4-8, 11-15*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 18-21, and 34-36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Morley et al (WO 99/59335).

Regarding Claim 1, Morley shows a method of securely displaying visual data comprising the steps of encrypting the visual data, whereby encrypted visual data is formed, transporting the encrypted visual data to a display apparatus, and decrypting the encrypted visual data within the display apparatus such that an electronic version of the visual data is maintained within circuit elements that are substantially inaccessible (page 6 lines 5-32, page 9 lines, 20-30, page 10 lines 1-12, page 11 lines 9-15). Furthermore, Morley shows displaying the visual data as a visual image (page 11 lines 9-15).

Regarding Claim 2, Morley shows the elements comprise integrated circuits (page 24 lines 13-24, page 39 pages 19-31).

Regarding Claim 3, Morley shows using a light valve to display the image through a display circuit (page 44 lines 12-20).

Regarding Claim 18, Morley shows using a secret key to decrypt the visual data (page 22 lines 20-26, page 33 lines 24-29, page 40 lines 24-29).

Regarding Claim 19, Morley shows a system that securely displays visual data comprising an encryption apparatus for encrypting the visual data, whereby encrypted visual data is formed, transporting the encrypted visual data to a display apparatus, and decrypting the encrypted visual data within the display apparatus such that an electronic version of the visual data is maintained within circuit elements that are substantially inaccessible (page 6 lines 5-32, page 9 lines, 20-30, page 10 lines 1-12, page 11 lines 9-15). Furthermore, Morley shows displaying the visual data as a visual image (page 11 lines 9-15).

Regarding Claim 20, Morley shows the elements comprise integrated circuits (page 24 lines 13-24, page 39 pages 19-31).

Regarding Claim 21, Morley shows using a light valve to display the image through a display circuit (page 44 lines 12-20).

Regarding Claim 34, Morley shows using a secret key to decrypt the visual data (page 22 lines 20-26, page 33 lines 24-29, page 40 lines 24-29).

Regarding Claim 35, Morley shows a display apparatus for displaying encrypted visual data comprising circuit elements that are inaccessible, the elements comprising a decryption circuit and a display circuit for displaying the visual data, such that an electronic version of the data is maintained within circuit elements (page 6 lines 5-32, page 9 lines, 20-30, page 10 lines 1-12, page 11 lines 9-15, page 11 lines 9-15).

Regarding Claim 36, Morley shows using a light valve to display the image through a display circuit (page 44 lines 12-20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 4-14, 22-30, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morley et al in further view of Kowarz et al.

Regarding Claim 4, Morley shows a light valve but does not show a grating light valve. Kowarz shows using a grating light valve (page 1 sections 0002, 0004, 0006, page 3 sections 0033, 0036, page 4 section 0039). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley by using a grating light valve to provide a brighter, better quality picture to the user.

Regarding Claim 5, Morley shows using a single integrated circuit (fig. 11).

Regarding Claim 6, Morley shows using integrated circuits (fig. 11). Although not specifically stated, since Morley shows a digital transmission and communications system, it is inherent that the visual data is encoded and decoded by digital communications hardware, or circuits.

Regarding Claim 7, Kowarz shows a driver circuit for driving the grating light valve (page 4 sections 0039-0041). Morley also shows a driver circuit (page 44 lines 4-30).

Regarding Claim 8, Kowarz shows scanning a line image over a display screen (page 4 section 0039).

Regarding Claim 9, Morley shows a decryption circuit (fig. 11).

Regarding Claim 10, Morley shows that the transporting of the visual data is electronic transmission (page 6 lines 27-32).

Regarding Claim 11, Morley shows a variety of electronic transmission means (page 6 lines 27-32).

Regarding Claim 12, Morley shows physically transporting the visual data on a storage medium (page 39 lines 5-7).

Regarding Claim 13, Morley shows a variety of storage mediums (page 35 lines 22-31,page 36 lines 12-24).

Regarding Claim 14, Morley shows a variety of storage mediums (page 35 lines 22-31,page 36 lines 12-24).

Regarding Claim 22, Morley shows a light valve but does not show a grating light valve. Kowarz shows using a grating light valve (page 1 sections 0002, 0004, 0006, page 3 sections 0033, 0036, page 4 section 0039 It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley by using a grating light valve to provide a brighter, better quality picture to the user.

Regarding Claim 23, Morley shows using a single integrated circuit (fig. 11).

Regarding Claim 24, Morley shows using integrated circuits (fig. 11). Although not specifically stated, since Morley shows a digital transmission and communications system, it is inherent that the visual data is encoded and decoded by digital communications hardware, or circuits.

Regarding Claim 25, Kowarz shows scanning a line image over a display screen (page 4 section 0039).

Regarding Claim 26, Morley shows that the transporting of the visual data is electronic transmission (page 6 lines 27-32).

Regarding Claim 27, Morley shows a variety of electronic transmission means (page 6 lines 27-32).

Regarding Claim 28, Morley shows a variety of storage mediums (page 35 lines 22-31,page 36 lines 12-24).

Regarding Claim 29, Morley shows a variety of storage mediums (page 35 lines 22-31,page 36 lines 12-24).

Regarding Claim 30, Morley shows a variety of storage mediums (page 35 lines 22-31,page 36 lines 12-24).

Regarding Claim 37, Morley shows a light valve but does not show a grating light valve. Kowarz shows using a grating light valve (page 1 sections 0002, 0004, 0006, page 3 sections 0033, 0036, page 4 section 0039). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley by using a grating light valve to provide a brighter, better quality picture to the user.

Regarding Claim 38, Morley shows a display apparatus for displaying encrypted visual data comprising a decryption circuit for decrypting the visual data (page 6 lines 5-32, page 9 lines, 20-30, page 10 lines 1-12, page 11 lines 9-15). Morley shows a light valve but does not show a grating light valve. Kowarz shows using a grating light valve (page 1 sections 0002, 0004, 0006, page 3 sections 0033, 0036, page 4 section 0039). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley by using a grating light valve to provide a brighter, better quality

picture to the user.

3. Claims 15-17 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morley et al.

Regarding Claim 15, Morley shows using a decryption key that resides in the display apparatus for decrypting the visual data (page 21 lines 16-32, page 22 lines 1-26, page 44 lines 13-25). Furthermore, Morley acknowledges that any number of a wide variety of encryption techniques may be used (page 21 lines 15-22). Morley fails to specifically state using a public and private key to decrypt the data. Official Notice is taken that it is well known and expected in the art to use public and private keys for encryption. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley with a private and public keys for encryption so that the data was secure during transmission.

Regarding Claim 16, Morley shows that the decryption takes place within the apparatus (page 21 lines 16-32, page 22 lines 1-26, page 44 lines 13-25). Morley does not show using a public and private key to decrypt the data. Official Notice is taken that it is well known and expected in the art to use public and private keys for encryption. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley with a private and public keys for encryption so that the data was secure during transmission.

Regarding Claim 17, Morley shows using a key card to provide the decryption key to the apparatus, which is outside of the display apparatus (page 41 lines 9-32, page

42 lines 1-32). Having this key on the card makes human access to the actual knowledge of the key unavailable. Morley fails to specifically state using a public and private key to decrypt the data. Official Notice is taken that it is well known and expected in the art to use public and private keys for encryption. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley with a private and public keys for encryption so that the data was secure during transmission.

Regarding Claim 31, Morley shows using a decryption key that resides in the display apparatus for decrypting the visual data (page 21 lines 16-32, page 22 lines 1-26, page 44 lines 13-25). Furthermore, Morley acknowledges that any number of a wide variety of encryption techniques may be used (page 21 lines 15-22). Morley fails to specifically state using a public and private key to decrypt the data. Official Notice is taken that it is well known and expected in the art to use public and private keys for encryption. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley with a private and public keys for encryption so that the data was secure during transmission.

Regarding Claim 32, Morley shows that the decryption takes place within the apparatus (page 21 lines 16-32, page 22 lines 1-26, page 44 lines 13-25). Morley does not show using a public and private key to decrypt the data Official Notice is taken that it is well known and expected in the art to use public and private keys for encryption. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley with a private and public keys for encryption so that the data was secure during transmission.

Regarding Claim 33, Morley shows using a key card to provide the decryption key to the apparatus, which is outside of the display apparatus (page 41 lines 9-32, page 42 lines 1-32). Having this key on the card makes human access to the actual knowledge of the key unavailable. Morley fails to specifically state using a public and private key to decrypt the data. Official Notice is taken that it is well known and expected in the art to use public and private keys for encryption. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morley with a private and public keys for encryption so that the data was secure during transmission.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sullivan U.S. Patent Application Publication No. 2002/0130820 discloses a multi-planer volumetric display system and method of operation.

Morley et al U.S. Patent Application Publication No. 2002/0122155 discloses an apparatus and method for cueing a theatre automation system.

Morley et al U.S. Patent Application Publication No. 2002/0056081 discloses an apparatus and method for decoding digital image and audio signals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R Nalevanko whose telephone number is 703-305-8093. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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